



# MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE GWALIOR

## Department of Mechanical Engineering

### REPORT OF SKILL BASED PROJECT

Theory of Machines -2

**Title of Project:- Energy generation and Conversion via flywheel**

#### Introduction:

A **flywheel** is a mechanical device which uses the conservation of angular momentum to store rotational energy; a form of kinetic energy proportional to the product of its moment of inertia and the square of its rotational speed. In particular, assuming the flywheel's moment of inertia is constant (i.e., a flywheel with fixed mass and second moment of area revolving about some fixed axis) then the stored (rotational) energy is directly associated with the square of its rotational speed.

#### Description of Model

The arrangement contains set of gears with 3:1 Gear ratio , the big flywheel , the modifier to store or directly use electricity at the end of contraption .



#### Applications of Model

Generation and conversion of mechanical to electrical energy can be done.

#### What I Learned Through Project:

Surface level details of the project with each part working and finishing processes like welding , cutting , grinding Paint job etc.

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